AMENDMENTS TO THE CLAIMS:

1. – 21.   (Canceled)

22.   (Currently Amended)   A method of analyzing a subject, comprising the steps of:

administering a processing agent substance to a subject chosen from a human being, a plant and an animal, the processing agent having a primary behavior effective in combination with a processing system to achieve a desired process result, the processing agent further having a distinctive signature characteristic distinguishing it from other processing agents;

testing for the distinctive signature characteristic of the processing agent using a test functionality of ~~the~~ a processing system;

selectively modifying subsequent operation of the processing system based on a result from the test for the distinctive signature characteristic of the processing agent.

23.   (Previously Presented)   A method according to claim 22, wherein the step of selectively modifying subsequent operation of the processing system comprises at least partially disabling output of the process result in the absence of the distinctive signature characteristic.

24.   (Currently Amended)   A method according to claim 22, wherein the administering step comprises administering a ~~the~~ processing agent ~~comprises~~ substance to a subject chosen from a human being, a plant and an animal, the processing agent having a first component for providing ~~the~~ a primary behavior effective in combination with a processing system to achieve a desired process result and a second component having ~~the~~ a distinctive signature characteristic distinguishing the processing agent from other processing agents.

25.   (Currently Amended)   A method according to claim 22 wherein the administering step comprises administering a processing agent substance to a human being, the processing agent having a primary behavior effective in combination with a processing system to achieve a desired process result, wherein the processing agent exhibits a distinctive signature characteristic ~~is in the behavior of the processing agent in the subject, and wherein the subject is~~ after administration to [[a]] the human being distinguishing the processing agent from other processing agents.

26.   (Currently Amended)   A method according to claim 25 wherein the administering step comprises administering a processing agent substance to a human being, the processing agent having a primary behavior effective in combination with a processing system to achieve a desired

process result, wherein the processing agent exhibits ~~distinctive signature characteristic is in~~ a time-dependent behavior of the processing agent in ~~the subject~~ the human being, distinguishing the processing agent from other processing agents.

27.   (**Currently Amended**)   A method according to claim 25 wherein the administering step comprises administering a processing agent substance to a human being, the processing agent having a primary behavior effective in combination with a processing system to achieve a desired process result, wherein the processing agent exhibits ~~distinctive signature characteristic is in~~ a spatially-dependent behavior of the processing agent ~~in the subject~~ after administration to the human being, distinguishing the processing agent from other processing agents.

28.   (**Currently Amended**)   A method according to claim 22 wherein the administering step comprises administering a processing agent substance to a subject chosen from a human being, a plant and an animal, the processing agent having a primary behavior effective in combination with a processing system to achieve a desired process result and a property ~~of the processing agent~~ detectable by the processing system distinguishing the processing agent from other processing agents.

29.   (**Currently Amended**)   A method according to claim 22 wherein the processing ~~system~~ apparatus comprises an analysis apparatus, the processing agent comprises an analysis agent, the analysis agent being administered to the analysis subject and detecting in response to the administering of the analysis agent a condition of the analysis subject as the process result.

30.   -- (**Cancel**)   An analysis system according to claim 29 wherein the distinctive signature characteristic is a property of the processing agent detectable by the analysis apparatus on analysis of the primary behavior of the analysis agent. --

31.   (**Currently Amended**)   A ~~An analysis~~ processing system according to claim [[29]] 40 wherein the ~~analysis~~ processing apparatus is a medical imaging apparatus and the ~~analysis~~ processing agent comprises a contrast agent.

32.   (**Currently Amended**)   A ~~An analysis~~ processing system according to claim 31 wherein the ~~analysis~~ processing agent comprises two radio isotopes of different decay characteristics to provide the distinctive signature characteristic.

33. (**Currently Amended**) A ~~An analysis~~ processing system according to claim 31 wherein the ~~analysis~~ processing agent comprises a component emitting photons of a particular energy to provide the distinctive signature characteristic.

34. (**Currently Amended**) A ~~An analysis~~ processing system according to claim 31 wherein the distinctive signature characteristic is a magnetic resonance spectrum of the contrast agent.

35. (**Currently Amended**) A ~~An analysis~~ processing system according to claim 31 wherein the ~~analysis~~ processing agent comprises the contrast agent and a further component having a distinctive magnetic resonance spectrum to provide the distinctive signature characteristic.

36. -- (**Canceled**) A method according to claim 22 wherein the processing subject is *in vitro*. --

37. (**Currently Amended**) Computer software embodied in a computer-readable medium, the software ~~A computer program~~ comprising ~~program code~~ instructions ~~for~~ providing a plurality of adjustable functionalities including a test functionality for detection of a distinctive signature characteristic of a processing agent ~~on a programmed data processor for use in carrying out the method of claim 22~~.

38. (**Currently Amended**) The computer software embodied in a computer-readable medium of ~~A computer program according to~~ claim 37, the software further comprising ~~program code~~ instructions for controlling the processing system to achieve the desired process result.

39. -- (**Canceled**) A processing agent for use in carrying out the method of claim 22 and having in relation to a predetermined subject a primary behavior effective in combination with the processing system to achieve a desired process result, and further having a distinctive signature characteristic distinguishing it from other processing agents and distinguishable by the test functionality. --

40. (**New**) A processing system, comprising:

a processing agent suitable for administration to a human being, a plant or an animal and having a primary behavior effective to achieve a desired process result, and a distinctive signature characteristic distinguishing it from other processing agents; and

a processing apparatus having a plurality of adjustable functionalities including

a test functionality for detection of the distinctive signature characteristic of the processing agent, and

an adjusting functionality for modifying the plurality of adjustable functionalities in response to detection or failure to detect the distinctive signature characteristic of the processing agent.

41.   (**New**)   The computer software embodied in a computer-readable medium of claim 37 further comprising instructions for adjusting the plurality of adjustable functionalities in response to detection or failure to detect the distinctive signature characteristic of the processing agent.

42.   (**New**)   The processing system according to claim 31, wherein medical imaging apparatus comprises a SPECT machine and the processing agent comprises a detectable isotope.

43.   (**New**)   The processing system according to claim 31, wherein medical imaging apparatus comprises a PET machine and the processing agent comprises a radioactive isotope.

44.   (**New**)   The processing system according to claim 31, wherein medical imaging apparatus comprises a MRI machine.

45.   (**New**)   The method of claim 22, wherein the processing agent substance comprises a radioactive isotope.

46.   (**New**)   The processing system of claim 40, wherein the processing agent comprises a radioactive isotope.